

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

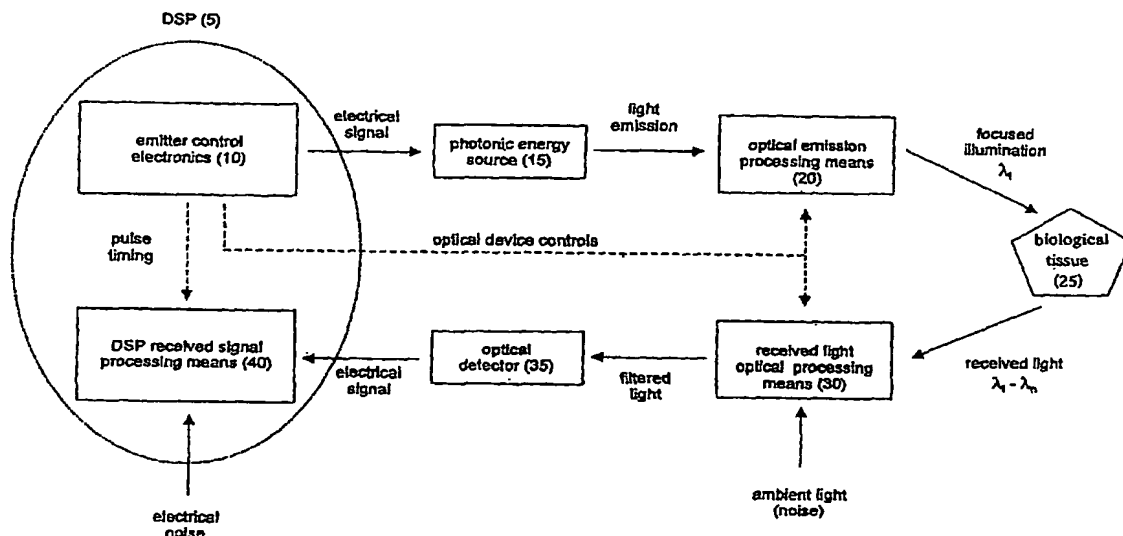
(19) World Intellectual Property
Organization
International Bureau(43) International Publication Date
25 March 2004 (25.03.2004)

PCT

(10) International Publication Number
WO 2004/023991 A1

- (51) International Patent Classification⁷: A61B 5/00 (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (21) International Application Number: PCT/CA2003/001372
- (22) International Filing Date: 16 September 2003 (16.09.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 2,403,748 16 September 2002 (16.09.2002) CA
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- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
- with international search report
 - before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: OPTICAL SYSTEM AND USE THEREOF FOR DETECTING PATTERNS IN BIOLOGICAL TISSUE



(57) Abstract: The present invention provides an optical system comprises a scanning spectrometer incorporating an electronic light modulator and digital signal processing means. The spectrometer technique combined with optical signal encoding provides the ability to obtain spectral signatures and identify optical patterns of biological tissue. One example of biological tissue scanning includes techniques such as identification of optical patterns of normal and abnormal tissues in addition to the delineation of these spectral patterns between the abnormal and normal tissue. Due to an enhanced signal-to-noise ratio provided by the optical system according to the present invention, this optical system can detect patterns in biological tissue that may be more subtle than those patterns that would be possible to obtain with currently available optical systems.